

matter which applicants regard as the invention. Reconsideration of this rejection is respectfully requested on the following grounds.

Claim 1 has been amended by changing the term "gene" into "DNA of interest" as suggested by the Examiner. Also, the expressions "functional fragments" and "derivatives thereof" have been deleted from claim 1. The expression "adapted" to be "operably located" were changed to "operably linked" as suggested by the Examiner.

Claim 2 has been amended by changing the term "modulated" into "activated", and the term "foreign" was added before the expression "DNA of interest" now replacing the term "gene".

In order to clarify claim 2, the expression "or absence" has been deleted.

Claim 4 has been deleted.

#### REJECTION UNDER 35 U.S.C. § 112, first paragraph

Claims 1 to 5 and 9 and 10 have been rejected under 35 U.S.C. § 112, first paragraph as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Reconsideration by the Examiner is respectfully requested on the following grounds.

The Applicants respectfully submit that from the disclosure, it is shown how to prepare the expression vectors: plasmid pBI101 is provided by Clontech, and plasmid PUC 19 is provided by Life Technologies. Someone skilled in the art would easily perform the protocol described according to the manufacturer's specification. Also, someone skilled in the art having the plasmid pGPLAS 3.2 in his hands would recognize that it results from the integration of SEQ ID NO: 1 into the cloning vector pGEM/T which is a vector provided by Promega. As mentioned on pages 4 and 5, different fragments from SEQ ID NO: 1, which is a functional promoter, is produced then integrated in a promoterless GUS cassette, which is also well-described in the specification of Clontech and corresponding to the expression vector pBI101, to obtain a new expression vector designated pBl201. Again, someone skilled in the art would realize that the promoter sequence or fragments thereof described and claimed in the present application are simply fused, as it is well known in the art, at the 5' terminus of the GUS reporter gene in pBI201.

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In addition, the declaration of Dr. Marc-André D'Aoust dated February 21, 2001 as well as the results described in the present application show that the promoter described in SEQ ID NO: 1 and fragments thereof, namely P960 and P729, which are respectively SEQ ID NO: 2 and 3, are active in inducing the transcription of the GUS marker genetically transformed plant cells. It is shown in the application that the expression vector carrying the promoters as defined in the present application works in plant cells as well. Any marker or vector known existing in art in which a transcription regulatory sequence, or promoter, can be introduced to determine the way it works in different conditions. Therefore, a skilled person would merely have to introduce the promoters as defined in the present application and having SEQ ID NO: 1, 2 or 3, to obtain functional expression vectors.

As claim 1 is now restricted to SEQ ID NO: 1, 2 and 3, which are well characterized, inoperable embodiments, such as fragments and derivatives thereof, have been removed from the claims.

Claim 2 has been amended to specify the activation of the transcription when submitting the promoter to the presence of light.

Claim 1 was amended by changing the term "organisms" into "plant", thus limiting the use of the promoters of the invention to plants.

It is brought to the Examiner's attention that Applicants do not describe or claim tissue specificity or expression level when promoters described in the present application activate the transcription and translation of a foreign DNA sequence of interest to which it is operably-linked. The promoters are said to be used in plants and plant cells in which they regulate the expression of a foreign sequence of interest. Someone skilled in the art will understand that Applicants do not claim plants or plant cells in which the promoters of the present invention do not work. Also, it is well known in the art that the use of a promoter originating from one group of organism, such as dicots, can be successfully used in other groups, such as monicots or vice-versa. It is believed that the only reason why someone skilled in the art would be required to perform unnecessary trial and error experimentations would be only to select a transgenic cell line or plants in which there is a desired level of expression of a foreign DNA sequence of interest.

we respectfully submit that the above comments, combined with the results obtained and provided in the declaration of Dr. Marc-André D'Aoust, demonstrate that Applicants had possession of the claimed invention at the time of filing the present application.

For the previously mentioned reasons, it is now believed that claim 1, 2, 5, 9 and 10 are in compliance with 35 U.S.C. § 112, first paragraph, and withdrawal of this rejection is respectfully submitted.

It is submitted, therefore, that the claims are now in condition for allowance. Reconsideration of the rejections is respectfully requested. Allowance of all claims at an early date is solicited.

In the event that there are any questions concerning this amendment, or the application in general, the Examiner is respectfully urged to telephone the undersigned so that prosecution of the application may be expedited.

Sespectfully submitted,

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Date: <u>March 25, 2003</u>

#### CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office on the date shown below.

Paul Marcoux

Name of person signing certification

Signature

March 25, 2003

Date

### Version with markings to show changes made to the Claims

- 1. A promoter for regulating expression of foreign genes <u>DNA of interest</u> in transgenic <u>organismsplant</u>, which comprises a promoter <u>having the identifying characteristics of a promoter having a sequence selected from the group consisting of sequences set forth in SEQ ID NOS:1 to 3 and <u>functional fragments or derivatives thereof</u>, wherein sald promoter is <u>adapted to be operationally located operably linked with respect</u> to said foreign <u>gene DNA of interest</u> for expression of said <u>foreign gene DNA of interest</u>.</u>
- 2. The promoter of claim 1, wherein said promoter is modulated activated for transcriptional expression of said foreign gene—DNA of interest by presence or absence of light
- 3. The promoter of claim 1, wherein the promoter has a sequence selected from the group consisting of sequences set forth in SEQ-ID NOS:1 to 3.
- 4. The promoter of claim 1, wherein said organism is a plant.
- 5. The promoter of claim-41, wherein said plant is a dicot, a monocot or a gymnosperm.
- 9. An expression vector comprising a promoter as defined in claim1.
- 10. A plant cell or a plant genetically transformed with the expression vector of claim 9.

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### Version with Markings to show changes made to the Specification

plasmid was named pBI201 and was used for further constructs. Various deletion fragments of pGPlas3-2 were transcriptionally and transitionally translationally fused at the 5'terminus of the GUS reporter gene in pBI201 and these were used for transitory expression studies using DNA bombardment. Upon identification of the adequate deletion fragment, it was subcloned into a binary plant expression vector such as pBI101 (Clonetech). These recombinant plasmids were used for stable integration through *A. tumefaciens* infection as described below.

# Agrobacterium-mediated DNA transfer and regeneration of transgenic lines

The recombinant plasmids were introduced into *Agrobacterium tumefaciens* strain LBA4404 by electroporation as described in Khoudi et al (1999, *Biotechnol. Bioeng.*, <u>64</u>:135-143). Selected *Agrobacterium* strains were then co-cultivated with leaf disks from genotype C5-1 for 4 days in the absence of selection pressure (kanamycin). Following this incubation period, leaf disks were washed and pampered, and then allowed to form calli onto medium B5H. Calli were then transferred for 21 days on SH medium for embryo induction and for 28 days on BOi2Y for embryo development. Torpedo-shaped embryos were removed from Boi2Y and placed on MS medium for regeneration. Kanamycin was present in all cultivation medium except for co-cultivation and regeneration on MS. This method is described in length in Desgagnés et al (1995, *Plant Cell Tissue Organ Cult.* <u>42</u>:129-140). Rooted plantlets were grown to maturity in the greenhouse.

While the invention has been described in connection with specific embodiments thereof, it will be understood that it is capable of further modifications and this application is intended to cover any variations, uses, or adaptations of the invention following, in general, the principles of the invention and including such departures from the present disclosure as come within known or customary practice within the art to which the invention pertains and as may be applied to the essential features hereinbefore set forth, and as follows in the scope of the appended claim

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#### Version with Markings to show changes made to the Specification

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While the invention has been described in connection with specific embodiments thereof, it will be understood that it is capable of further modifications and this application is intended to cover any variations, uses, or adaptations of the invention following, in general, the principles of the invention and including such departures from the present disclosure as come within known or customary practice within the art to which the invention pertains and as may be applied to the essential features hereinbefore set forth, and as follows in the scope of the appended claim